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EXAMINER

KALINOWSKI, A

ART UNIT

PAPER NUMBER

2761

*8*

DATE MAILED:

07/07/99

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
**08/946,315**

Applicant(s)  
**Marshall**

Examiner  
**Alexander Kalinowski**

Group Art Unit  
**2761**



☒ Responsive to communication(s) filed on Oct 7, 1997

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 85-129 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 85-129 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☒ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 8

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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### DETAILED ACTION

1. Claims 85-129 are presented for examination.

#### *Specification*

2. The disclosure is objected to because of the following informalities: the specification is replete with grammatical and typographical errors too numerous to list. Examples of grammatical errors in the specification :

- a. on page 1, line 5, after "June 27, 1994," insert --now United States Patent No. 5,774,878,--;
- b. on page 5, line 5, after "that" insert --are--;
- c. on page 6, line 1, after "known" insert --in--;
- d. on page 7, line 24, replace "generate" with --generated--;
- e. on page 16, line 16, replace "pockets" with --packets--;
- f. on page 17, line 20, replace "model" with --module--;
- g. on page 17, line 22, replace "cause" with --causes--; and
- h. on page 17, line 36, replace "save" with --saved--.

Appropriate correction is required.

3. The disclosure is objected to because of the following informalities: the labeled unit number of the "user instructions" of Figure 1 referred to in the specification does not match the corresponding unit number of the labeled unit "user instructions" in Figure 1 of the drawings.

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a. on page 16, line 10, replace "user instructions 4" with --user instructions 10--.

Appropriate correction is required.

***Claim Objections***

4. Claims 117 and 121 are objected to because of the following informalities: typographical and grammatical errors.

a. In claim 117, line 18, after "display device" delete --;-- and

b. In claim 121, line 2, after "is" insert --a--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 85-129 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. The term "abstract information" in claims 85, 98, 100, 110, 115, 116, and 117 is a relative term which renders the claim indefinite. The term "abstract information" is not defined by the claims, the specification does not provide a standard for ascertaining the requisite degree, and one

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of ordinary skill in the art would not be reasonably apprised of the scope of the invention. In the specification, Applicant defines abstract information as “information about the real world that does not have a physical object equivalent in the real world” (page 6, line 37 - page 7, line 2). Applicant further states that sports information and financial information are examples of abstract data. However, Applicant admits that it is well known in the prior art to represent financial information using graphs and charts as metaphors. In addition, Applicant admits that it is well known in the virtual reality arts to simulate flying an aircraft (page 6, lines 6-10). Speed and inertia are forces that are integral components of the virtual reality simulation of flying an aircraft. They are forces that occur in the real world and have no physical object equivalents. Yet, these forces can be represented in the virtual reality world of flight simulation. Therefore, flight simulation is an example of abstract data according to Applicant’s definition. But at the same time Applicant admits that flight simulation is known in the prior art and is distinct from Applicant’s invention. It seems that Applicant’s definition of abstract is too vague and broad since it encompasses systems that Applicant admits are well known in the prior art. Therefore, one of ordinary skill in the art cannot reasonably determine the scope of Applicant’s invention. For purposes of applying prior art to the claims, Examiner assumes the definition of abstract data to be limited to financial information as described in the specification.

8. Claims 86-97, 99, 101-109, 111-114, and 118-129 are dependent claims dependent on independent claims 85, 98, 100, 110, 115, 116, and 117 and are rejected on the same basis.

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9. The term "sports information" in claim 123 is a relative term which renders the claim indefinite. The term "123" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The Applicant does not describe the type of information encompassed by the term "sports information". Does sports information mean won loss record ? Does it mean stadium configuration ? Does it mean simulation of sports games ? Therefore, one of ordinary skill in the art cannot reasonably determine the scope of Applicant's invention.

10. The term "defense information" in claim 124 is a relative term which renders the claim indefinite. The term "defense information" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

11. The term "legal information" in claim 125 is a relative term which renders the claim indefinite. The term "legal information" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

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### *Double Patenting*

12. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

13. Claims 85-129 are rejected under the judicially created doctrine of double patenting over claims 1-27 of U. S. Patent No. 5,675,746 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows:

a. With respect to claim 85, the '746 patent discloses a virtual reality generator to display abstract information as a multidimensional information terrain, the virtual reality generator (see abstract) comprising:

an input module unit 8 receiving the abstract information (i.e. financial information) from an information source (i.e. analytic system), the information source generating the information as

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a function of a predetermined analysis of realtime and pre-stored data (Fig. 1 and col. 8, lines 6-37);

a user interface module unit 2 including a first input selecting a categorical dimension (e.g. countries, industry groups) for each of a first dimension of a multi-dimensional information terrain and a second dimension of the multi-dimensional information terrain and a second input for selecting a numerical dimension for a third dimension of the multi-dimensional information terrain, the user interface module selecting a portion of the abstract information as a function of the categorical dimensions and the numerical dimension (Fig 1 and col. 11, lines 30-55); and

a virtual reality generator module unit 4 coupled to the input module and the user interface module, the virtual reality generator generating, continuously modifying and displaying on a display device a multi-dimensional information terrain that enables a user to simulate movement through and interact with the abstract information, the information terrain representing selected portions of the information, (Fig 3b and col. 12, line 58 - col. 13, line 27)

wherein when the user simulates movement through and interacts with the abstract information, the user viewing the display device has a sensation of traveling through and within the information terrain (Fig. 3b, col. 1, lines 33-41 and col. 13, lines 52-54).

b. With respect to claim 86, the '746 patent discloses the virtual reality generator of claim 85, wherein the display device is a visual stereoscopic head-mounted display device (col. 1, lines 33-41).



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c. With respect to claim 87, the '746 patent discloses the virtual reality generator of claim 85, wherein the selected portion of abstract information is displayed as a plurality of metaphors in the information terrain.

d. With respect to claim 88, the '746 patent discloses the virtual reality generator of claim 87, wherein the plurality of metaphors include geometric primitives (col. 10, lines 28-37).

e. With respect to claim 89, the '746 patent discloses the virtual reality generator of claim 87, wherein the plurality of metaphors include polygons (see claim 9).

f. With respect to claim 90, the '746 patent discloses the virtual reality generator of claim 87, wherein the plurality of metaphors are rotatable (see claim 10).

g. With respect to claim 91, the '746 patent discloses the virtual reality generator of claim 87, wherein the plurality of metaphors have variable luminance (col. 6, lines 36-38).

h. With respect to claim 92, the '746 patent discloses the virtual reality generator of claim 87, wherein the user interface module further includes a third input for selecting at least one display dimension, and wherein at least a subset of the plurality of metaphors is displayed as a

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function of a predetermined one of the at least one display dimension (col. 9, lines 7-15 and lines 48-57).

i. With respect to claim 93, the '746 patent discloses the virtual reality generator of claim 87, wherein subset of the plurality of metaphors is selected to flash by a predetermined one of the plurality of display, each metaphor in the subset generated by the virtual reality module such that it flashes (col. 9, lines 7-15 and lines 48-57).

j. With respect to claim 94, the '746 patent discloses the virtual reality generator of claim 85, wherein the information terrain is updated at least 30 times per second (col. 13, lines 23-24).

k. With respect to claim 95, the '746 patent discloses the virtual reality generator of claim 85, wherein the virtual reality generator module includes means for generating and simultaneously displaying a plurality of information terrains (col. 6, lines 51-64).

l. With respect to claim 96, the '746 patent discloses the virtual reality generator of claim 87, wherein the user interface module is operable to select one of the plurality of metaphors and wherein the virtual reality generator module is operable to display information relating to the selected one of the plurality of metaphors as a function of the at least one display dimension (col. 9, lines 49-56).

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m. With respect to claim 97, the '746 patent discloses the virtual reality generator of claim 87 further comprising means for producing sounds relating to the selected one of the plurality of metaphors (col. 9, lines 17-20).

n. With respect to claim 98, the '746 patent discloses a virtual reality generator to generate and display on a display device a stream of abstract information received from an analytic system (see abstract), the virtual reality generator comprising:

an input module to continuously receive the stream of abstract information from the analytic system, the analytic system generating the abstract information as a function of a predetermined analysis on real-time and pre-stored data (Fig. 1 and col. 8, lines 8-37);

a user interface module having a first input for selecting a categorical dimension for each of a first dimension of a multi-dimensional information terrain and a second dimension of the multi-dimensional information terrain and a second input for selecting a numerical dimension for a third dimension of the multi-dimensional information terrain, the user interface module selecting a portion of the abstract information as a function of the categorical dimensions and the numerical dimension (Fig. 1 and col. 11, lines 30-55); and

a virtual reality generator module coupled to the input module and the user interface module, the virtual reality generator generating and displaying an information terrain on the display device, the information terrain being a multi-dimensional representation of the stream of

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the information displayable from a plurality of user selected perspectives to enable a user to simulate movement through the information terrain such that the user has a sensation of traveling through and within the information terrain, the virtual reality generator module generating and continuously modifying the information terrain so that the information terrain correspondingly represents the stream of the selected portion of the information, causing the information terrain to be displayed on the display device, and simulating, on the display device, movement through the information terrain such that the user viewing the display device has a sensation of traveling through and within the information terrain (Fig. 3b, col. 1, lines 33-41, col. 12, line 57 - col. 13, line 27, and col. 13, lines 52-54).

o. With respect to claim 99, the '746 patent discloses the virtual reality generator of claim 98, wherein a view of the information terrain is generated by the virtual reality generator module at least 30 times per second, and wherein the virtual reality generator module updates the information terrain displayed on the display device at least 30 times per second (col. 13, lines 9-17 and lines 23-34).

p. With respect to claim 100, the '746 patent discloses a virtual reality generator to display on a display device abstract information (see abstract), the virtual reality generator comprising:

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an input module to receive the abstract information as input, the abstract information including real-time data and pre-stored data (Fig. 1 and col. 8, lines 8-37);

a user interface module having a first input for selecting a categorical dimension for each of a first dimension of a multi-dimensional information terrain and a second dimension of the multi-dimensional information terrain and a second input for selecting a numerical dimension for a third dimension of the multi-dimensional information terrain, the user interface module selecting a portion of the abstract information as a function of the categorical dimensions and the numerical dimension (Fig. 1 and col. 11, lines 30-55); and

a virtual reality generator module coupled to the input module and the user interface module, the virtual reality generator generating and displaying an information terrain on the display device, the information terrain being a multi-dimensional representation of the selected portion of the abstract information continuously displayed from a plurality of user selected perspectives to enable a user to simulate movement through the information terrain such that the user has a sensation of traveling through and within the information terrain, the virtual reality generator module for generating the information terrain representing the selected portion of the information, causing the information terrain to be displayed on the display device from a plurality of perspectives, and simulating, on the display device, movement through the information terrain such that the user viewing the display device has a sensation of traveling through and within the information terrain (Fig. 3b, col. 1, lines 33-41, col. 12, line 57 - col. 13, line 27, and col. 13, lines 52-54).

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q. With respect to claim 101, the '746 patent discloses the virtual reality generator of claim 100, wherein a view of the information terrain is generated by the virtual reality generator module at least 30 times per second, and wherein the virtual reality generator module updates the information terrain displayed on the display device at least 30 times per second (col. 13, lines 9-17 and lines 23-24).

r. With respect to claim 102, the '746 patent discloses the virtual reality generator of claim 100, wherein the input module receives the information from a database of information (col. 11, lines 13-15).

s. With respect to claim 103, the '746 patent discloses the virtual reality generator of claim 100, wherein the information is preprocessed by an analytic system prior to receipt by the input module (col. 13, lines 3-8).

t. With respect to claim 104, the '746 patent discloses the virtual reality generator of claim 100, wherein the information is preprocessed by a fuzzy logic-based system prior to receipt by the input module (col. 5, lines 28-30).

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u. With respect to claim 105, the '746 patent discloses the virtual reality generator of claim 100, wherein the information is preprocessed by a neural network prior receipt by the input module (col. 5, lines 25-27).

v. With respect to claim 106, the '746 patent discloses the virtual reality generator of claim 100, wherein the simulated movement is controlled by movement of a headset containing the display device (col. 1, lines 45-55).

w. With respect to claim 107, the '746 patent discloses the virtual reality generator of claim 100, wherein the user interface module further includes a third input for selecting at least one display dimension, and wherein the information terrain includes a plurality of metaphors, each one of the plurality of metaphors representing a subset of the selected portion of the abstract information (col. 10, lines 25-45).

x. With respect to claim 108, the '746 patent discloses the virtual reality generator of claim 100, wherein the display device is a monitor (col. 13, lines 33-34).

y. With respect to claim 109, the '746 patent discloses the virtual reality generator of claim 100, wherein the display device is a visual stereoscopic head-mounted display device (col. 1, lines 33-44).

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z. With respect to claim 110, the '746 patent discloses a virtual reality generator to display on a display device abstract information as an information terrain, the information terrain being an interface that enables a user to simulate movement through the abstract information (see abstract), the virtual reality generator comprising:

an input module for receiving as input in real-time the abstract information from a source of abstract information, the source providing real-time and pre-stored data (Fig. 1 and col. 8, lines 6-37);

a user interface module having a first input for selecting a categorical dimension for each of a first dimension of a multi-dimensional information terrain and a second dimension of the multi-dimensional information terrain and a second input for selecting a numerical dimension for a third dimension of the multi-dimensional information terrain, the user interface module selecting a portion of the abstract information as a function of the categorical dimensions and the numerical dimension (Fig. 1, lines 30-55); and

a virtual reality generator module coupled to the input module and the user interface module, the virtual reality generator generating and displaying an information terrain on the display device, the information terrain being a multi-dimensional representation of the abstract information displayable from a plurality of user selected perspectives to enable a user to simulate movement through the information terrain such that the user has a sensation of traveling through



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and within the information terrain (Fig. 3b, col. 1, lines 33-41, and col. 12, line 57 - col. 13, line 27), the virtual reality generator module:

(I) generating, in real-time as the selected portion of the abstract information is received from the real-time data source of abstract information, the information terrain representing the abstract information,

(ii) displaying in real-time on the display device the information terrain representing the selected portion of the preprocessed information,

(iii) displaying the information terrain from a plurality of perspectives, and

(iv) simulating in real-time, on the display device, movement through the information terrain (col. 5, lines 33-55).

aa. With respect to claim 111, the '746 patent discloses the virtual reality generator of claim 110, wherein the information terrain is updated at least 30 times per second (col. 13, lines 23-24).

bb. With respect to claim 112, the '746 patent discloses the virtual reality generator of claim 110, wherein the virtual reality generator module generates and simultaneously displays a plurality of information terrains (col. 6, lines 51-64).

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cc. With respect to claim 113, the '746 patent discloses the virtual reality generator of claim 110, wherein the selected portion of the abstract information is displayed as a plurality of metaphors in the information terrain (col. 9, lines 17-40).

dd. With respect to claim 114, the '746 patent discloses the virtual reality generator of claim 113, wherein the virtual reality generator module includes means for selecting one of the plurality of metaphors and wherein the virtual reality generator module includes means for displaying information relating to the selected one of the plurality of metaphors (col. 9, lines 17-40).

ee. With respect to claim 115, the '746 patent discloses a virtual reality generator (see abstract), comprising:

an input module to receive packets of abstract information at regular predetermined intervals, the abstract information being generated as a function of real-time and pre-stored data (Fig. 1 and col. 8, lines 6-37);

a user interface module having a first input for selecting a categorical dimension for each of a first dimension of a multi-dimensional information terrain and a second dimension of the multi-dimensional information terrain and a second input for selecting a numerical dimension for the third dimension of the multi-dimensional information terrain, the user interface module

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selecting a portion of the abstract information as a function of the categorical dimensions and the numerical dimension (Fig. 1 and col. 11, lines 30-55);

a display driver (i.e. virtual reality generator) coupled to the input module and the user interface module, the display driver for displaying on a display device an information terrain generated from the packets of the selected portion of the abstract information, the information terrain being a multidimensional representation of the packets of the selected portion of the data mining information continuously displayed from a plurality of user-selected perspectives to enable a user to simulate movement through and interact with the information terrain such that the user, when viewing the display device, has a sensation of traveling within the information terrain (Fig. 3b, col. 1, lines 27-33 and col. 12, line 57 - col. 13, line 27); and

a processor for updating the information terrain when a new packet of data mining information is received by the input module (col. 13, line 25-37).

ff. With respect to claim 116, the '746 patent discloses a computer-based method for displaying and manipulating large quantities of information (see abstract and col. 13, lines 25-37), the method comprising the steps of:

receiving as input preprocessed abstract information, the preprocessed information being generated as a function of real-time and pre-stored data (Fig. 1 and col. 8, lines 6-37);

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selecting a categorical dimension for each of a first dimension of a multi-dimensional information terrain and a second dimension of a multi-dimensional information terrain and a numerical dimension for the third dimension of a multi-dimensional information terrain;

selecting a portion of the information as a function of the categorical dimensions and the numerical dimension for display (Fig. 1 and col. 11, lines 30-55);

generating an information terrain from the selected portion of the information, the information terrain being a multi-dimensional representation of the information capable of being displayed from a plurality of user selected perspectives to enable a user to simulate movement through the information terrain (Fig. 1 and col. 12, line 57 - col. 13, line 27); and

displaying on a display device the information terrain as the multi-dimensional interface that enables simulation of movement through and interaction with the information such that the user, when viewing the display device, has a sensation of traveling through and within the data mining information displayed as the information terrain (col. 13, lines 37-50).

gg. With respect to claim 117, the '746 patent discloses a computer implemented method for displaying and manipulating information (see abstract and col. 13, lines 25-37), the method comprising the steps of

continuously receiving as input packets of the pre processed abstract information, the pre-processed information including real-time and pre-stored data (col. 8, lines 8-37);

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selecting a categorical dimension for each of a first dimension of a multi-dimensional information terrain and a second dimension of the multi-dimensional information terrain and a numerical dimension for a third dimension of the multi-dimensional interface;

selecting a portion of the information as a function of the categorical dimensions and the numerical dimension for display (Fig. 1 and col. 11, lines 30-55);

generating an information terrain from the information, the information terrain representing the selected portion of the information and capable of being displayed from a plurality of perspectives to enable a user to simulate movement through the information terrain (Fig. 1, col. 12, line 57 - col. 13, line 27);

displaying the information terrain as a multi-dimensional representation on a display device such that a user can simulate movement through the information (col. 13, lines 33-50);

updating the information terrain on the display device when the selected portion of the information is received (col. 13, lines 24-26); and

simulating movement through the information terrain on the display device such that the user, when viewing the display device; has a sensation of traveling through and within the information terrain (col. 13, lines 38-55).

hh. With respect to claim 118, the '746 patent discloses the virtual reality generator of claim 92, wherein the at least one display dimension displays the subset of the plurality of

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metaphors via one of a flashing, a spinning, a rotation, a shaping, a coloring and a texturing of the subset of the plurality of metaphor (col. 9, lines 10-20 and col. 10, lines 25-32).

ii. With respect to claim 119, the '746 patent discloses the virtual reality generator according to claim 85, wherein the information source is a financial analytic system (col. 8, lines 6-15).

jj. With respect to claim 120, the '746 patent discloses the virtual reality generator according to claim 85, wherein the information source is a fuzzy-logic based system (col. 5, lines 24-32).

kk. With respect to claim 121, the '746 patent discloses the virtual reality generator according to claim 85, wherein the information source is rule based expert system (col. 5, lines 24-32).

ll. With respect to claim 122, the '746 patent discloses the virtual reality generator according to claim 85, wherein the information source is a neural network (col. 5, lines 24-32).

mm. With respect to claim 123, the '746 patent discloses the virtual reality generator according to claim 85, wherein the abstract information is sports information (col. 3, lines 47-50).

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nn. With respect to claim 124, the '746 patent discloses the virtual reality generator according to claim 85, wherein the abstract information is defense information (col. 3, lines 47-50).

oo. With respect to claim 125, the '746 patent discloses the virtual reality generator according to claim 85, wherein the abstract information is legal information (col. 3, lines 47-50).

pp. With respect to claim 126, the '746 patent discloses the virtual reality generator according to claim 98, wherein the analytic system is a financial analytic system (col. 8, lines 6-15).

qq. With respect to claim 127, the '746 patent discloses the virtual reality generator according to claim 98, wherein the analytic system is a fuzzy-logic based system (col. 5, lines 24-32).

rr. With respect to claim 128, the '746 patent discloses the virtual reality generator according to claim 98, wherein the analytic system is rule based expert system (col. 5, lines 24-32).

ss. With respect to claim 129, the '746 patent discloses the virtual reality generator according to claim 98, wherein the analytic system is a neural network (col. 5, lines 24-32).

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Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

14. Claims 85-129 are rejected under the judicially created doctrine of double patenting over claims 1-42 of U. S. Patent No. 5,774,878 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows:

The '878 patent has the same disclosure as the '746 patent and therefore the claims are rejected for the same reasons set forth above. The Examiner asserts that every limitation disclosed in the claims of the instant application is recited in the disclosure of the '878 patent.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.



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*Conclusion*

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. "Financial Technology Insight" discloses the use of virtual reality to simulate financial market information.

b. "Electronic Engineering Times" discloses a virtual reality interface that produces three dimensional objects that represent abstract data.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Kalinowski, whose telephone number is (703) 305-2398. The examiner can normally be reached on Monday to Thursday from 8:30 AM to 6:00 PM. In addition, the examiner can be reached on alternate Fridays.

If any attempt to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Emanuel Todd Voeltz, can be reached on (703) 305-9714. The fax telephone number for this group is (703) 305-0040.

Alexander Kalinowski *AK*

6/30/99

*[Signature]*  
EMANUEL TODD VOELTZ  
SUPERVISORY PATENT EXAMINER  
GROUP 2700